

Appn. No. 10/631,310

Attorney Docket No. 10541-1966

**I. Listing of Claims**

1. (Currently Amended): A multiple zone electronic control system to control a heating, ventilation and air conditioning (HVAC) system for a vehicle comprising:

a plurality of sensors to provide inputs relating to multiple zones of an occupant compartment of the vehicle;

a plurality of buttons to provide manual inputs relating to the multiple zones;

a plurality of mechanisms to control temperature and flow of air from the HVAC system into the multiple zones; and

a controller electrically connected to said sensors and said buttons to receive the inputs therefrom and calculating a driver side blend function, rear blend function and passenger side blend function wherein the rear blend function is a calculation based on the driver side blend function and the passenger side blend function and interpolating outputs based on a blend linear interpolation for each blend function, said controller electrically connected to said mechanisms to control the temperature and flow of air into each of the multiple zones.

2. (Original): A multiple zone electronic control system as set forth in claim 1 wherein said multiple zones comprise a driver side zone, a passenger side zone and a rear zone.

3. (Original): A multiple zone electronic control system as set forth in claim 1 wherein said sensors include a sunload sensor for each of said zones.

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4. (Original): A multiple zone electronic control system as set forth in claim 1 wherein said sensors include a blend door position sensor for each of said zones.
  
5. (Original): A multiple zone electronic control system as set forth in claim 1 wherein said sensors include an ambient temperature sensor.
  
6. (Original): A multiple zone electronic control system as set forth in claim 1 wherein said sensors include an interior temperature sensor.
  
7. (Original): A multiple zone electronic control system as set forth in claim 1 wherein said buttons include a set temperature for each of said zones.
  
8. (Original): A multiple zone electronic control system as set forth in claim 1 including a display electrically connected to said controller to display information related to the control of the HVAC system.
  
9. (Original): A multiple zone electronic control system as set forth in claim 1 wherein said controller comprises a microprocessor and a plurality of driver circuits for said mechanisms.
  
10. (Original): A multiple zone electronic control system as set forth in claim 1 wherein said microprocessor includes an analog input section, digital input section, digital output section and pulse width modulation section.

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11. (Currently Amended): A multiple zone electronic control system to control a heating, ventilation and air conditioning (HVAC) system for a vehicle comprising:

a plurality of sensors to provide inputs relating to multiple zones of an occupant compartment of the vehicle comprising a drive side zone, a passenger side zone, and a rear zone;

a plurality of buttons to provide manual inputs relating to the multiple zones;

a plurality of mechanisms to control temperature and flow of air from the HVAC system into the multiple zones; and

a controller electrically connected to said sensors and said buttons to receive the inputs therefrom and calculating a front driver side blend function, and a rear blend function, and passenger side blend function wherein the rear blend function is a calculation based on the driver side blend function and the passenger side blend function and interpolating outputs based on a blend linear interpolation for each blend function, said controller being electrically connected to said mechanisms to control the temperature and flow of air into each of the multiple zones based on the calculated functions.

12. (Cancelled)